Owner's Guide

Self-contained Water System

a-dec®

85.0675.00

Products List | Print | Table of Contents

Warranty Information

Serial Number N/A

Model Number N/A

Date Purchased _____

Date of Service	Model/Description of Service	Technician's Initials

For service information contact your local authorized A-dec dealer.

Check with local codes and A.D.A. (Americans with Disabilities Act) Requirements for Installation of this product.

A-dec warrants its products against defects in material or workmanship for one year from time of delivery (except for handpieces which have a warranty period of six months). A-dec's sole obligation under the warranty is to provide parts for the repair, or at its option, to provide the replacement product (excluding labor). The buyer shall have no other remedy. (All special, incidental, and coincidental damages are excluded.) Written notice of breach of warranty must be given to A-dec within the warranty period. The warranty does not cover damage resulting from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilization chemicals and processes. The warranty also does not cover light bulbs. Failure to follow instructions provided in A-dec's Operation and Maintenance Instructions (Owner's Guide) may void the warranty.

NO OTHER WARRANTIES AS TO
MERCHANTABILITY OR OTHERWISE ARE MADE

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About Your Self-contained Water System

Note

The benefits from using your A-dec self-contained water system are realized only when periodic system flushing and disinfection procedures are followed. **Failure to follow the procedures in this manual may expose patients to water with higher than normal microbe counts.**

The disinfection procedures in this Owner's Guide were developed to enhance the water quality from an A-dec handpiece delivery system. These procedures are recommended for *all* A-dec handpiece delivery systems.

If you have questions regarding the A-dec self-contained water system with non-A-dec equipment, contact your equipment dealer or the *manufacturer* of your delivery system.

The A-dec self-contained water system is designed so you can optimize the quality of your dental unit water. With an A-dec self-contained water system, you control the quality of water expelled from dental handpieces and syringes in two ways: (1) you select the quality of your dental unit water source, and (2) you perform waterline asepsis and treat your waterlines with the proper disinfectants.

Caution

Use caution when using the self-contained water system on any dental units equipped with components which might fail when the water supply is interrupted. Scalers and water heaters (except the low voltage inline water heater/heated syringe tubing) are examples of components which can be permanently damaged if operated without a continuous water source.

How Does It Work?

Air, regulated to 40 psi (276 kPa), is supplied to the water bottle through a restrictor barb attached to the bottle cap. The air pressure in the bottle forces the water from the bottle up into the water pickup tube and out to the handpiece control blocks and the syringes. Your dental unit water system becomes a closed system, isolated from the municipal supply.

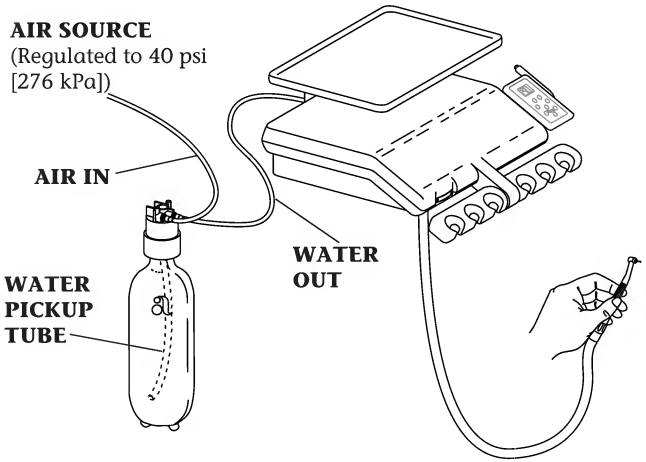

Figure 1. Self-contained Water System

The Correct Water To Use

The correct water for you to use in your A-dec self-contained water system (for patient treatment) depends on the quality of water available from your municipal source and the goals you have for using an A-dec self-contained water system.

Tap water: If you have confidence in the quality of water delivered by your municipal supply, you may consider using fresh tap water in your A-dec self-contained water system. Use of tap water must be done in conjunction with the operation and maintenance procedures prescribed in this manual. **Failure to follow all procedures in this manual can result in dental unit water that contains higher than normal microbe counts.**

Distilled water: If you have concerns about the quality of water delivered through your municipal supply, we recommend the use of water which has been distilled under the standards of the *United States Pharmacopoeia (U.S.P.)*. Water distilled under these standards has been processed in optimum conditions. Most reputable bottled water companies operate under U.S.P. standards.

Throughout the remainder of this Owner's Guide, the water you have chosen to use will be referred to as ***treatment water***. It is important that whenever treatment water is specified in this manual for a procedure, you should be consistent in using the same type of treatment water (fresh tap water or distilled water).

CAUTION

Do not use saline solutions, mouth rinses, or any chemical solutions not specified in this manual in your A-dec self-contained water system. These may damage the water system components and cause the failure of your dental unit. If you need to use such solutions, a water supply system separate from your dental unit should be used. As a general rule, water that is suitable for drinking is suitable to run through your delivery system. *(See "Disinfectant Solution" on page 8)*

About The Water Bottle

WARNING

NEVER USE GLASS BOTTLES ON THE A-DEC SELF-CONTAINED WATER SYSTEM. GLASS BOTTLES CAN POSE A SERIOUS SAFETY HAZARD IF BROKEN WHILE PRESSURIZED.

1. Use only A-dec water bottles.
2. Never use PET® material soda pop-type bottles.
3. Never use two liter bottles.

The water bottle should be mounted where visible so you and your staff can easily monitor the level of water in the bottle.

WARNING

NEVER INSTALL A DAMAGED BOTTLE.

Activating The System

WARNING

Before handling, filling, and installing water bottles on the A-dec self-contained water system, take special care to wash hands with anti-microbial soap. Then wear a new pair of exam gloves. *Avoid touching the water pickup tube (see Figure 1, page 3).*

To use the A-dec self-contained water system, fill the bottle with treatment water. If the dental unit is not ON, move the master on/off toggle to the ON position.

Align the full bottle with the self-contained water cap, making sure the 1/4-inch (6.4 mm) clear pick-up tube extends straight down into the water bottle. Screw the bottle onto the cap until it is secure. Air can be heard filling the bottle until the bottle is pressurized to 40 psi (276 kPa), which may take up to 60 seconds. Operate the syringe and handpieces to clear any air from the water system.

To prevent running out of water during mid-procedure, we recommend that you refill the bottle with treatment water before running too low. Replace a near-empty bottle by unscrewing it from the cap (slowly, to release the air pressure) and replace it with a filled bottle. There is no need to move the dental unit master on/off toggle to the OFF position while changing bottles.

Suggested Asepsis For A-dec Self-contained Water Systems

There are three major elements of asepsis for A-dec self-contained water systems:

1. Bottle disinfection.
2. Daily purging with air.
3. Weekly water system purging and disinfection.

Disinfectant Solution

We recommend a disinfectant solution of one part household bleach (5.25% sodium hypochlorite) plus nine parts treatment water. This 1:10 (one-in-ten) solution should be used in all bottle and waterline asepsis.

For the following procedures, fill a treatment bottle with approximately 600 ml (about 20 oz) of the 1:10 disinfectant solution. Simply mix 60 ml (about 2 oz) bleach with 540 ml (about 18 oz) treatment water. Make certain to prepare fresh solution for each clinic week.

Caution

When using a chemical such as sodium hypochlorite which can stain or bleach tile, carpeting, or upholstery; take the necessary precautions to prevent spills and dripping. While flushing the system, hold the syringe and handpiece tubings over a sink, basin or bucket.

Bottle Disinfection

Caution

Plastic water bottles cannot withstand heat sterilization. Attempting to do so will destroy the bottle and may damage your sterilizer. The A-dec self-contained water system was not designed to deliver sterile water from handpieces and syringes.

To disinfect an A-dec water bottle pour about half a cup of the 1:10 solution into the bottle, cap and shake for about five seconds, then allow it to stand for 10 minutes. Shake the bottle again. Empty the bottle and rinse twice with treatment water.

Daily Procedures (Purging the Dental Unit)

Your dental unit should be purged with air at the end of each clinic day. Make sure the handpieces have been removed from the tubings before purging the system.

1. Remove and empty the installed water bottle, then reinstall it.
2. Hold handpiece tubing and syringe over a basin or bucket. Turn the unit on, wait a few moments, then operate the unit flush valve, syringe, and foot control until the water is purged from the system.
3. Turn off the unit.

Weekly Procedures

The following procedures should be performed at least once a week, preferably at the beginning of each clinic week, before the first patient.

1. **Make sure the handpieces have been removed from the tubings before purging the system.**
2. **Make certain the unit has been purged with air** *(see Daily Procedures on page 9).*
3. **Fill and flush with disinfectant:**
   a) Make sure the unit is off. Remove the empty water bottle and set it aside for disinfection *(see Bottle Disinfection on page 9).*
   b) Add approximately 600 ml (about 20 oz) of the 1:10 disinfectant solution *(refer to Disinfectant Solution on page 8)* to a disinfected bottle. This will be referred to as the *disinfectant bottle.* Install the bottle.
   c) Hold handpiece tubings and syringe over a basin or bucket. Turn the unit on, wait a few moments, then operate the unit flush valve, syringe and foot control until a steady stream of disinfectant solution begins flowing through the tubings (about 15–20 seconds).
4. **Allow disinfectant to remain in the unit for at least 10 minutes (never more than 30 minutes).**

5. **Purge the unit with air:**
   a) Install an empty disinfectant bottle to the unit. Hold the handpiece tubings and syringe over a basin or bucket. Turn the unit on, wait a few moments, then operate the unit flush valve, syringe, and foot control until the disinfectant solution is purged from the system.
   b) Turn off the unit.
6. **Fill with treatment water:**
   a) Make sure the unit is off. Remove the empty *disinfectant bottle*. Then install a disinfected bottle filled with treatment water.
   b) Hold handpiece tubings and syringe over a basin or bucket. Turn the unit on, wait a few moments, then operate the unit flush valve, syringe, and foot control until a steady stream of treatment water begins flowing through the tubings (about 20–30 seconds). Your dental unit is now ready for use.

Procedure For Infrequently Used Dental Units

In some applications, dental units may have long periods of downtime between use. For units that will not be operated for longer than one week, we recommend the above flushing and disinfecting procedure immediately before and after each lengthy downtime period. Follow *Weekly Procedures 1–5 (see page 10)*.

Care Instructions

For surface cleaning and disinfecting instructions, refer to your **Equipment Asepsis Owner's Guide**, *A-dec Publication No. 85.0696.00*.

Maintenance

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Used Dental Units .....*page 11*
Care Instructions
Equipment Asepsis
Owner's Guide *85.0696.00*
Parts
Maintenance Parts
Owner's Guide *85.2634.00*

Specifications are subject to change without notice.

Identification of Symbols

Recognized by Underwriters Laboratories Inc. ® with respect to electric shock, fire and mechanical hazards only in accordance with UL 2601-1. Recognized with respect to electric shock, fire, mechanical and other specified hazards only in accordance with CAN/CSA C22.2, No. 601.1.

UL listed to US (UL 544) and Canadian (CAN/CSA C22.2, No. 125) safety standards.

Classified by Underwriters Laboratories Inc. ® with respect to electric shock, fire and mechanical hazards only in accordance with UL 2601-1. Classified with respect to electric shock, fire, mechanical and other specified hazards only in accordance with CAN/CSA C22.2, No. 601.1.

Conforms to European Directives *(refer to Declaration Statement)*

Protective earth (ground).

Functional earth (ground).

Attention, consult accompanying documents.

TYPE B APPLIED PART.

CLASS II EQUIPMENT.

Classification of Equipment (EN 60601-1)

Type of shock protection:

CLASS I EQUIPMENT
(Dental Chairs, Dental Lights, & Power Supplies)

CLASS II EQUIPMENT
(Chair, Wall, & Cart Mounted Delivery Systems)

Degree of shock protection:

TYPE B APPLIED PART (All products)

Degree of protection against water ingress:

ORDINARY EQUIPMENT (All products)

Mode of operation

CONTINUOUS OPERATION
(All models except Dental Chairs)

Mode of operation

CONTINUOUS OPERATION
WITH INTERMITTENT LOADING (Dental Chairs)

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